

Iowa Power Fund Board - Due Diligence Committee (DDC)
Meeting Minutes
October 22, 2008

Iowa Utilities Board, Conference Room #3
Des Moines, IA

Call to Order

Roya Stanley, Chair, called the meeting to order at 1:08pm

Roll Call

Member	Present	Absent
Tom Barton	Conf Call	
Franklin Codel		X
Ted Crosbie	X	
Vern Gebhart		X
Patricia Higby	X	
Fred Hubbell	X	
William (Curt) Hunter	Conf. Call	
Roya Stanley	X	

Also in attendance from the OEI, Governor's office, Iowa Power Fund Board: Brian Crowe, Mary Lewis (Recording Secretary) Deborah Svec-Carstens (general counsel) and Lucy Norton (IPF Board).

Approval of Agenda

Ms. Stanley asked for a motion to approve the agenda. Ms. Higby motioned to approve; Mr. Barton seconded the motion. The motion passed unanimously.

Approval of Minutes

Ms. Stanley asked for a motion to accept the August 27th minutes. Mr. Barton motioned to approve; Mr. Hubbell seconded the motion. The motion passed unanimously.

Chair's Remarks

Power Fund Project List was handed out to the committee and the public and Ms. Stanley explained that the document represented projects that have gone on to contracts, are currently in the process of negotiation for contract or have been tabled for further discussion. Mr. Barton asked the status of Renew Energy Systems project. Ms. Stanley deferred to Mr. Crowe for that answer. Mr. Crowe explained that OEI was waiting on Renew Energy Systems to prove that they can produce the amount of money they said they could raise. Mr. Crowe acknowledged that the applicant had timed out of the Energy Center (ISU) but OEI had asked that the applicant go back to the Energy Center and to re-apply for their original funding request. They also need hard commitment from the banks and have all of their dollars in place. Mr. Crowe also said that things look like their moving forward if the applicant can secure that funding. Mr. Barton was satisfied with Mr. Crowe's answer.

Full-Application Review

08-07-1142 ISU – Increasing the use of Distiller Grains in Livestock Diets

Since 1999, there has been a 265 % growth in ethanol production, with much of it centered in Iowa and surrounding states. Production of ethanol by-products in the U. S. has increased as well. Iowa ethanol plants currently produce about 4.3 million tons of distillers grains.

Distillers grains are rich in protein and energy and are an economical feedstuff; however, some nutritional factors limit their inclusion in livestock diets. Distillers grains contain a relatively high content of insoluble fiber, which is not readily digested by non-ruminants, thus limiting their use in swine and poultry diets. Yeast cell wall components and antibiotics used to manipulate growth of ethanol-producing yeast in ethanol plants show up in the feed. Yeast cell wall components may be beneficial; however, antibiotics can exceed legal limits in swine and poultry diets. High sulfate content of distillers grains can cause a neurological disorder when large amounts are fed to ruminants, thus use of distillers grains as a beef feedstuff is limited. We propose distillers grains feeding studies for swine, poultry, and cattle to address strategies to overcome the insoluble fiber, antibiotic, and sulfate limitations, respectively, so that the use of distillers grains in livestock diets may be increased.

Q: How would you prioritize the studies within your project?

A: I may have to have my colleagues help out with that because I'm incredibly biased. I work primarily with the beef industry, specifically with feedlots and the sulfur issue is forefront on my mind, one that I deal with everyday. But my colleagues in swine and poultry could argue that their projects are as equally important. All of them have the potential to expand the use of distillers grains. Of course, beef cattle, we already feed very high volumes of distillers grains to feedlot cattle. But even a small increase would be a large tonnage. Again, you must understand my bias.

Q: How does the funding break out between the swine and beef portions?

A: The swine and beef are approximately equal and the poultry study is less.

Q: So the work that you're proposing is essentially the same as was in the pre-proposal, is that correct?

A: Yes.

Q: And, you've got significantly more cost share now than you did in the pre-proposal.

A: Yes.

Q: And yet, the amount that you're asking is the same. So, how can that be when you're putting in more for cost share shouldn't that have reduced the cost that you're requesting from the Iowa Power Fund?

A: The amount required is essentially the same. Much of the cost share is internal allocations that we've included. In addition to that, we have cost share listed as additional studies that do things beyond this proposal. For example, one of the studies we have listed as cost share we have not completely secured these funds yet but we're quite positive about it, which is a proposal we've submitted to the Farm Bureau to do a companion follow-up study looking at quality in beef...

Q: And that's for a follow-up study. If you secure that funding, it will not lower the amount that you're requesting at all.

A: No.

Q: So, let me make sure I understand. On page 16 of your application, you list additional sources of process of attaining funds. One is \$100,000 from Farm Bureau...

A: Right.

Q: The document suggests that you don't have the money yet but you're saying you've listed that as other sources of funds that are available? Matching funds?

A: We've listed that as funds we're in the process of applying for. That's not included in the amount at the top that's indicated as "Total Secured Matching Funds"

Q: So you've already got \$320(K).

A: Right.

Q: And you're asking us for roughly \$400(K)?

A: Exactly

Q: So that's the whole \$720(K)?

A: Yes.

Q: So the Farm Bureau and all these other people...

A: It's in addition to that.

Q: ...which is about \$260,000 - when you add up those, Farm Bureau, ADM, etc. I guess my question is, if you have that \$260(K), would you need the Power Fund money?

A: Yes, because these studies are highly related but they're different studies.

Q: Why are there no private entities that are funders? Have you sought private funding from these types of entities or others?

A: We have...

Q: In the pre-app I thought you had, or gone to look at, the Iowa Beef Center, the Iowa Beef Industry Council...

A: We had. The Iowa Beef Center of the Iowa Beef Industry Council and the Leopold Center are the projects we left off the full proposal because those are projects that we are currently in the process of completing. And we chose to look ahead rather than look back.

Q: So that money was never intended for this project?

A: For this project specifically, those are very highly related projects but those are projects that we have the funding secure and we're in the process of completing those.

Q: So have you tried to get any, other than your internal allocations at Iowa State, have you tried to get any matching funds for this other than the Power Fund?

A: Some of it's kind of a chicken and egg thing. We feel we have the opportunity to, especially with the sulfur project, and each project is different in many regards but in the sulfur project, once the model's developed, we think there's some real opportunities to get additional funding from people that can utilize that to evaluate different mitigation strategies for the sulfur problem. In the swine, Brian is working on some matching funding.

A2: On the swine projects that are listed, basically, the Cellencor, the POET, the (National) Pork Board, those are in grants that I have already. For example, the POET is a similar type product from POET fractionation. It's specifically for their product so they will probably have reduced oil product that I'm going to look at but it's targeted for their product. Pork Board funding is similar type research. That's money kind of allocated for that type of work but I can use it to work within this proposed guideline. So I can kind of make it fit in there but I would still need to do objectives that they had funded specifically.

Q: It seems like the two primary groups that benefit, would benefit from this research, are the people that produce the DDGs in the first place and the people who feed them in the second place, right? So the ethanol plants that produce them are all here with their handout, they want money, including POET, and the producers, you typically don't ask them for cost share other than through the Beef Council and the Pork Board. I'm not sure where you'd go to find matching funds. That was more of a statement but I meant it as a question. Where do you find matching funds?

Q2: The USDA doesn't fund anything like this?

A: Well Brian is USDA so his contributions to this are kind of indirectly...

A2: They're internal.

A: Yes, they're internal. I should have indicated that. Brian is with the USDA-ARS office in Ames with the National Swine Research.

A2: So it'd be similar reallocation of my time, funding for me, my technicians, supplies. Some of that I would handle internally to cover this project and externally to cover the rest of the project.

Q: Ok, let me phrase it differently. On page 16, besides the projects you're talking about, you've got roughly six other research projects in one form or another. And you've got three, so there's nine research projects here. And you've got \$320, 000, \$260,00 for the proposal so that's \$580,000. I get the sense that you want to do all of these projects with no prioritization so you're asking us to fund the balance so you can do all of these projects. And what I'm saying is, in a perfect world that's great but we have limited funds too and had you really spent the time to prioritize these projects against these other projects and get the industry players here to decide what's the most important ones, and put them in the right priority and industry put in some money, Iowa State put in some money and we'll put in some money. I'm getting the feeling that you want us to fund everything.

Q2: Going back to that "sources of other funding", the Iowa Power Fund approved, at least the DDC approved, did the Iowa Power Fund approve the Utilizing Glycerol in Swine and Poultry?

A: Yes.

Q: We did, ok. So there was a project utilizing glycerol instead of DDGs and they were only requesting \$66,550 but they were not including beef in it. It was just for swine and poultry. But I think they were getting some help from the Iowa and Illinois Corn Growers so is that another source of funding that you could have gone to?

A: Actually, we have had some preliminary discussions with the corn growers. They have some interest in funding some research. From the beef cattle standpoint, funding a sulfur issue is difficult to find sources to fund that type of research. The ethanol industry, of course it's important to them but in many cases, they're not in the position now to fund a lot of research. And the beef

industry, the National Cattleman's Association for the Beef Industry Council, can only fund product research. They're obligated by law to only fund product research. Nutrition research for sulfur issues; they can't fund that research. So it's a challenge to find sources. We have been in discussions with ADM. We're very close to doing some funding but what they want to do is more targeted, more specific things that will help them. Although it's related to this, it's not this proposal to really develop a model to help try to solve this sulfur problem. That's the issue.

Q: Ok, but you have POET and ADM, two of the biggest players in this field wanting to fund their own projects. That's great but that takes up a big portion of the industry. Why should we fund the balance?

A: You make good arguments.

A2: I'm in discussions with ADM too and it's their product targeted approach is what they're going to want to do.

Q2: Personally, I think you're in a bit of a bind because I don't know who you get matching funds from. I'd be in the same situation; I wouldn't know how to answer this question. Because I don't think there is good answer. Sulfur is a big issue but it's not limiting their business at this point so they're not going to fund it. A couple of years from now, it could limit their business but right now it doesn't. I think it's something that we need to do because it's for the public good, for the Iowa Cattleman's good, to figure out sulfur. But nobody's going to fund it and that's a problem. If we don't, this isn't going to happen in the way it should.

A: We've asked ADM "why don't you stop using sulfuric acid and put something else in its place?" and that's not an option. So they're creating this problem that they want somebody else to solve.

Q2: I think this research needs to be done and I don't know whose going to provide matching funds in the traditional ways.

Q: I don't disagree with that but I'm still struggling a little bit with "how valuable is the research?" If the two biggest players on the market don't want to put any money on it, they want to do their own thing, then I have to be a little more convinced that somebody's really going to benefit from this.

A3: I might be able to speak to that. I work in a diagnostic lab and I get to see the cases that come in with the sulfur toxicity issues and it's a weekly issue that we have. People will ask us "why don't you know what we can do to diagnose it or alleviate it or some sort of intervention strategy?" and the reason is we just haven't had the money to try to do some of the basic science that's required to try and figure out what's going on. We know the cause but a lot of the diagnostic intervention strategy, to help the producers, we just don't have the science right now to do that

Q2: It's an "on farm" issue that ADM doesn't care about. This sulfur poisoning happens on the farm, right?

A3: Right.

Q2: And that's not where ADM works. They could care less.

Q: So the farmer has the option of not buying those DDGs?

A3: The problem is they don't know what the sulfur concentration is with every batch they get. So they're trying to lease cost their ration but nobody knows, when they get a new batch of any of the corn feed product, what the sulfur concentration is going to be. It's a "roll the dice" and hope that you're going to get product...

Q: So do I understand correctly that sulfur concentration is a result of the reduced oil fractionation?

A: No.

Q: No, so it's just there because...

A3: Because of the manufacturing process.

Q: ... and the sulfur gas in the pipes?

Q2: Here's what happens, if you're my friend in Atlantic that feeds cattle, truck pulls in and dumps this yellow mass, on the ground, and he has no idea what the sulfur content of that is. He only feeds it by guess and by golly because he doesn't have the analytical capabilities and because it actually is a cost effective way to fill the ration, he wants to put in as much as he can but he doesn't know exactly how much to put and every batch is different.

Q: And that's what I was going to say, every batch is different so he's going to have to be able to analyze every batch that comes to his farm and then...

A3: And then he'd know the concentration but there's still a lot of other variables out there; the sulfur, the drinking water, environmental factors and other feeds we know have interactions with sulfurs.

Q: So even when your research says "this is the amount of sulfur you can safely feed to your beef" then he still has to go back and find out how much sulfur is in that last batch that got delivered.

A: Right, and that number, of what can safely be fed, is the variable number depending on the characteristics which we don't know as much about as we should.

Q: But another option is not feeding the DDGs?

Q2: That's not an option. It's not. It's not from a production point of view, it's not from an ethanol industry point of view, it is not from an Iowa agricultural option not to feed DDGs.

Q: Have there been any studies done that take into account the concern that people have about eating animals that have been fed distillers grains?

A: I'm not aware...

Q2: Consumers don't know what livestock being fed now so why would they ever comprehend the DDG issue.

A: The only comment I can make related to that question is that there has been some debate among natural food labels, natural beef, where inputs are restricted, no implants, those types of things, about whether or not distillers grains should be included and the only concern there was because some of those programs restrict GMO corn and currently there's not a way to eliminate GMO corn as a source in distillers grains. To answer your question specifically, in terms of study, consumer concerns or acceptability of animals that have been fed distillers grains, I'm not aware of that.

A2: The one thing they say in swine is high levels of typical distillers, or high levels of oil, give you the soft belly which is a soft bacon. I mean, that's the concern. Feed quality really doesn't change, it's a fatty acid quality change that's softer bacon when it cools down and that's where some of the interest is, lowering the amount of oil from a nutritional standpoint but also some of the low oil is driven by the biodiesel industry wanting the oil for biodiesel or having corn oil for human consumption.

A3: In case of eggs, they can contain more pigments of lutein which is more healthful for the eye. So that's going to be more helpful to the consumer.

Q: What about the quality of the meat?

A: I haven't seen any studies done.

Q2: But if there's a higher lutein content through the corn, it's the same thing as going into Hy-Vee and buying lutein prime eggs.

A3: Yes.

A: For those of you on the phone that might not have been able to hear this conversation there's two comments, lutein in distillers grains can improve the quality in eggs but the high oil content in distillers grains can reduce pork quality in terms of soft bellies and soft bacon.

Q2: But the organic concerns are largely around the use of insect protected corn to produce the DDGs in the first place not the DDG process itself.

Q: Are the swine researchers involved in this project? Did you apply for the \$100,000 fund that's available to the Attorney General's Office specifically for swine research?

A2: I have not been, no. Since I'm federally funded, many projects, I don't request money for because I'm already federally funded. My relationship, in this project, since Iowa State at the time was short a swine nutritionist, I helped them design what I thought was a forward thinking project of what would be needed in the next three years or so, and design the project and form within that they needed.

Q: For your information, there's a \$100,000 fund out of the Attorney General's Office in the state which funds swine research and the annual solicitation is coming up, I believe this month. It is split up between many projects but a group from Iowa State did receive funds last year.

Yes – Crosbie

Table – Hunter – very useful research but needs more information on how it impacts the most, environmentally or economically, **Hubbell** – not sure of funding the total amount requested but would put some money into it – would like clearer prioritization of the different studies outlined

within the project, **Higby** – had initially voted no for the pre-proposal but now understand why there's a lack of cost share

No – Barton – feels that the research is needed but that it won't help with energy independence

Proposal has been tabled until applicant can address committee caveats of how research will impact environmentally/economically, what is the priority order of the studies within the project and having a clear outline of what each piece of the research would cost.

Review of Pre-application

08-10-1155 Hybrid Power Center – Geothermal – Natural Gas Integrated Thermal Cycle, Hybrid Power Centers, LLC

RECUSAL - Barton

Reviewed by Barton

- Wasn't clear why and where Iowa Power Fund funding was for or where it would be applied.
- Novelty of the project is pre-heating.
- Of the five personnel listed on the project, three have nuclear backgrounds and two are lawyers with technical experience.
- Mid-American is currently doing a technical review on project.
- Study expected to be completed in mid-December.

Yes –

Yes If – Hunter, Higby, Crosbie, Hubbell – applicant needs to better address how their budget breaks down, how Power Fund money would specifically be used and how the science works for the project

No But –

No –

Applicant is welcome to come back to the DDC if the three caveats can be met by December 1, 2008 for the meeting on December 15, 2008

08-10-1156 Iowa Agricultural Energy Efficiency Program, EnSave, Inc

Reviewed by Hubbell

- Will do business in Iowa if we give them money.
- Part of the project proposes doing a mailing to family farms to see if there's an interest in doing a farm-wide audit.
- Other part of the project to partial energy audits for the first 25,000 responses
- Of those 25,000 responses, 180 farms would be chosen for follow-up audits over the next few years.
- The applicant is requesting 3.4 million to subsidize the equipment that utilities wouldn't have.
 - o Alliant does farm audits and Mid-American just submitted their five year plan to the Iowa Utilities Board outlining their commitment to doing farm audits.

Committee asked if anyone present represented EnSave. Jane Flemming of Iowa Farm Bureau was present. Ms. Flemming stated that she and Mr. Dave Lyons funded the pilot program that partnered them with EnSave. The pilot program did four farm audits on a cross sample of four different types of farming operations and it brought a lot of requests of interest from farmers across the state. Ms. Higby proposed that an Iowa college create a program to train auditors. The three key factors are: 1) expense vs. benefit, 2) the approach would benefit Iowa and 3) there would be connection with utilities. Ms. Higby suggested that we address this subject with John at the Iowa Utilities Board (IUB).

Yes –

Yes If –
No But –

No – Higby, Hunter, Crosbie, Hubbell, Barton

08-10-1153 Streetlight Innovation Project, Denison Municipal Utilities

Reviewed by Gebhart
Presented by Stanley

- Asking for money to change out their low pressure sodium lamps to LED's
- Going to put in some money but they're asking for a significant portion from the Power Fund
- Cost is really prohibitive
- Need to look at product price feasibility and if it's cost effective
- Current lamps are 150w and project proposes to replace them with 70w

Yes –
Yes If –
No But –

No – Higby, Hunter, Hubbell, Barton

08-10-1154 Training Curriculum and Certification Program for IA Green Building Professionals, AJK Design, Inc.

Reviewed by Higby

- Proposing a training program through college to build accredited assessors who would be auditing for certification of energy efficiency building for the JumpStart program.
- Qualifications are excellent.
- Cost share is in cost of a building.
 - o LEEDs certified, building or training costs not well defined
 - o Don't tell us if people are interested.
 - o Applicant might be waiting to present a full application to include more of those details.
 - o Like the idea but don't think this is the right way to get it.

Yes –
Yes If – Higby
No But –

No – Hubbell, Hunter, Barton

Other Business

Ms. Stanley reminded the committee that the next Due Diligence Committee meeting would be December 15, 2008 and that the following meetings would be held every other month after the first of the New Year. The committee will keep the fourth Wednesday but that the first meeting in 2009 would be in February. Mr. Crowe said that a schedule would be sent to everyone once meeting locations had been made.

Adjournment

3:15pm

Respectfully Submitted,

Mary Lewis, Recorder